

## REMARKS

This paper accompanies a request for continuing examination ("RCE") and is in response to the final official action of July 11, 2006, wherein claims 30 and 32-35 were rejected.

By the foregoing, claim 30 has been canceled, and claims 32-35 remain at issue.

The title of the application has been amended to be consistent with the presently claimed subject matter.

The issues raised in the official action will be addressed in the order appearing therein.

### Information Disclosure Statement

A new, "Third Supplemental Information Disclosure Statement" identifying all art not previously of record and identified in the information disclosure statements filed March 10, 2006, and June 16, 2006, as well as additional art, is submitted. Entry and consideration of the art is solicited.

### Priority Under 35 U.S.C. § 119

In the previous action, the examiner indicated that no certified copy of German priority application 102 61 720.1-45 has been received, despite the fact that the priority document was filed with the application on December 30, 2003.

In order to expedite prosecution, a new certified copy of the priority document is submitted herewith.

### Claim Rejections - 35 U.S.C. § 103

Claims 30 and 32-35 have been rejected as obvious over Angeletakis et al. U.S. 2002/0193462 (the "462 reference"), and claim 30 has additionally been rejected as obvious over Davidson et al. U.S. 5,376,442.

The rejection of claim 30 are moot in view of the cancellation of that claim.

The rejection of claims 32-35 as obvious over the '462 reference is respectfully but strongly traversed. Reconsideration is requested.

In the response to the applicants' prior arguments, the examiner takes issue with the meaning of the term "ceramic," disagreeing with the characterization of the term "ceramic" as meaning a "formed and sintered material." The examiner's position is that the term "ceramic" is not limited to such materials, but encompasses other forms of ceramics such as particles, as allegedly suggested by the '462 reference.

On the enclosed pages 565 and 566 of the encyclopedia "Chemie" of Brockhaus (with translation) there is a definition and a description of "Keramik." The definition states that ceramics are made of non-metallic inorganic substances by forming, drying, and heat-treating. The sintering temperature should be between 800°C and 1600°C (see page 2 of the translation).

The claims recite materials or products comprising a ceramic formed of a metal oxide powder, such products are art recognized to be made by sintering at a temperature between 900°C and 1700°C (see lines 20 to 24 of page 11 of the present specification).

The product described in '462 differs from such materials in at least two aspects:

a) The reference product is based on an organic material, because it is a resin made of polymerizable vinyl compounds (see claims 1 and 4 of the reference). The reference product is a composite resin, which is a suspension of strengthening agents, such as mineral filler particles, in a resin matrix (see paragraph 2 of the reference).

b) The reference product is made by polymerization (see paragraph 12) for example at 50°C (see paragraph 25).

Therefore, the examiner's opinion that the product of '462 could be a ceramic is respectfully disagreed with.

Further the '462 reference does not disclose the ratio or average particle sizes. Therefore, '462 could not disclose the special range of this ratio as claimed.

From the foregoing, it is seen that the '462 reference does not teach or suggest:

1. to make a ceramic instead a cured resin with dispersed fillers,
2. the importance of the ratio of average particle sizes, and
3. the selection of a maximum size ratio of 40:1.

It was not obvious to make a ceramic instead of a cured resin because the products and the methods for producing the products are quite different, and in the end product the powder is dispersed in the one case and agglomerated in the other. Therefore, one would not expect the same results.

The retrospective approach of the examiner in the first paragraph of page two is an impermissible basis to support a rejection. However, even if one calculates the ratio of the average particle sizes of the coarse and of the fine fraction of the reference, a range of  $0.50\text{ }\mu\text{m}: 100\text{ nm} = 5:1$  to  $0.05\text{ }\mu\text{m}: 100\text{ nm} = 0.5:1$  are obtained. This range is outside the range of the claims. The size of the fine fraction can also be less than 100 nm, especially less than 20 nm (see paragraph 18). If the size would be 10 nm, then the highest ratio would be  $0.50\text{ }\mu\text{m}: 10\text{ nm} = 50:1$ . In this hypothetical case, the range is from 50:1 to 0.5:1 (a factor of 100). The factor of the claimed ranges is  $40:12.4 = 3.2$ . Therefore, a very small part (3.2) of a broad range (100) is recited in the claim.

For the foregoing reasons, it is urged that the claims 32-35 are of proper scope and form for allowance, and such action is solicited.

Should the examiner wish to discuss the foregoing or any matter of form in an effort to advance this application toward allowance, he is urged to telephone the undersigned at the indicated number.

Respectfully submitted,

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